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LEADING ARTICLES

ECTOPIC GESTATION.

EDWIN WALKER, M. D.

EVANSVILLE, IND.

THE object of this paper is not to treat exhaustively the etiology, pathology or treatment of ectopic gestation, but to present the salient points, especially those which shall help in the early diagnosis of the trouble.

Extra-uterine pregnancy has been recognized since the middle of the eleventh century, and for nearly thirty-five years the condition has been thoroughly understood, and it has been twenty-five years since Tait made his first operation for rupture of the sac, still it is frequently overlooked, causing deaths which could have been saved by early diagnosis and prompt operation. It is the general practitioner who encounters these cases, and on his diagnostic skill hangs the life of the patient.

Not long ago I received a letter from an illiterate man describing the condition of his wife, who was ill in another city. The description of ruptured tubal pregnancy was so clear, that I telegraphed him at once to call the best surgeon in the city, as an operation would be necessary, which he did, but the surgeon arrived only to find the patient dead from internal hemorrhage. The physician in charge of the case had never suspected the true nature of the trouble.

At this time, an error in diagnosis in a typical case, is inexcusable. I propose in this paper to point out the symptoms on which it can be based, omitting the discussion of disputed points and rare or exceptional cases.

History.—The history of extrauterine pregnancy is certainly a very remarkable one. It was recognized and described in the middle of the eleventh century, and has been reviewed by many observers since, yet no one seriously proposed to operate for its relief until Dr. John Burns, of Glasgow, in 1814 offered this suggestion.

In 1842, Campbell collected much useful information which helped to bring the question before the profession. In 1848, Bernutz also pointed out the feasibility of an operation. These suggestions were entirely unheeded.

Our own countryman, Dr. John S. Parry, of Philadelphia, in 1876, published a monograph which clearly set forth the nature and diagnosis of the trouble, and pointed to surgery as its only relief. I quote the following from his book, which shows how thoroughly he understood the subject:

"Here is an accident which may happen to any wife in the most useful period in the existence, which good authorities have said is never cured, and for which even in this age, when science and art boast of such high attainments, no remedy, either medical or surgical, has been tried with a single success. From the middle of the eleventh century, when Albuicasis described the first known case of extrauterine pregnancy, men have doubtless watched the life ebb rapidly from the pale victim of this accident, as the torrent of blood is poured into the abdominal cavity, but have never raised a hand to help her. Surely this is an anomaly, and it has no parallel in the whole history of human injuries. The fact sems incredible, for if one life is saved by active interference, it may be triumphantly pointed to as the first and only instance of the kind on record. In the whole domain of surgery—for we cannot look to other than surgical measures under the circumstances—there is now left no field like this. In this accident if any, there is certain death."

In this same year, 1876, Lawson Tait's book on Diseases of Women, contains an excellent article under the heading of "Hematocele and Extrauterine Pregnancy," with a

full description of the subject; still he does not urge operation. As early as 1873, he had operated on late cases, but it was not until 1883 that he had the courage to operate for recent rupture.

It is really strange that so many years should elapse before efficient measures were adopted. I quote the following from Tait himself, showing how reluctantly he was forced into action:

"In the summer of 1881, I was asked by Mr. Hallwright to see with him, in consultation, a patient who had arrived by train from London in a condition of serious illness, that illness having been diagnosed by Mr. Hallwright as probably hemorrhage into the peritoneal cavity from a ruptured tubal pregnancy. The patient was blanched and collapsed, the uterus was fixed to a doughy mass in the pelvis, and there was clearly a considerable amount of effusion in the peritoneum, but no distinct tumor could be felt above, and I agreed with Mr. Hallwright as to the nature of the lesion. This gentleman made the bold suggestion that I should open the abdomen and remove the ruptured tube. The suggestion staggered me, and I am ashamed to have to say I did not receive it favorably. I saw the patient again, in consultation with Mr. Hallwright and Dr. James Johnson, and again I declined to act upon Mr. Hallwright's request, and a further hemorrhage killed the patient. A post-mortem examination revealed the perfect accuracy of the diagnosis." Unfortunately his first operation (1883) was unsuccessful, but further work fully repaid him for the stand he had taken.

My first operation was in August, 1890. I was called to see the patient in the night, and I found her suffering from symptoms of rupture. I explained to her and her husband the nature of the trouble, and proposed an operation. They gave consent and it was done the next morning. When I returned to my office, a patient was waiting for me with the same trouble. Rupture had probably taken place at that time, and she had a period of relief, but during the following night the symptoms returned and I operated as soon as I could get ready. Both patients recovered and are still living.

Causes.—The causes of extrauterine pregnancy are summed up in the following quotation from Kelly, "We therefore believe that extrauterine pregnancy is simply due to some interference with the normal downward passage of the fertilized ovum through the tube."

The pathological conditions which are most frequently the cause, are chronic salpingitis, most frequently gonorrheal, adhesions from peritonitis, and congenital defects of the tube. Other causes are too rare to require any mention here.

After all the discussion which has covered many pages, about the classification of extrauterine pregnancy, nothing has shaken Tait's original stand, namely, that practically all of them are in the tube. While a few seeming exceptions have been reported, they are so rare as to be of little practical value to the practitioner. Ovarian and abdominal pregnancy may occur, as a few well-observed cases seem to prove, but they are so rare that I shall not consider them in this paper.

I would make only two divisions—the interstitial and tubal. In the former, which is quite rare, the ovum finds its lodgment in that portion of the tube within the wall of the uterus. Most of these cases rupture into the abdominal cavity between the sixth and twelfth week, with fatal hemorrhage. Kelly says that some of them find their way into the uterus, and develop as a normal pregnancy. Also, that it may rupture into the broad ligament and develop there. The two latter varieties must be extremely rare.

Of those developing in the tube, according to Tait's experience, rupture occurs not later than the third month, but exceptional cases have been reported where the symptoms of rupture had been absent, and the pregnancy had gone on to term. These latter cases, however, may have been due to development after rupture in which the symptoms were not pronounced.

Rupture may take place directly into the abdominal cavity; in which case, the hemorrhage is usually quite profuse, more so as the ovum is attached nearer the proximal end of the tube. The great hemorrhage in these cases, is due to the large size and thin walls of the placental vessels, which are very much larger than those which supply a normal tube.

When the ovum is situated near the fimbriated extremity of the tube, it is sometimes expelled into the peritoneal cavity with only moderate hemorrhage (tubal abortion) and there develops or dies. The tube may also rupture between the layers of the broad ligament. This Tait seemed to think not uncommon, but later observers (Ross and Kelly) consider it quite rare, the adhesions over the effused blood being mistaken for the layers of the broad ligament.

It is well to remember also that occasionally it may exist in both tubes. Also, the extra and inter-uterine pregnancy may occur at the same time. A few instances of both have been reported.

Pathological Anatomy.—The impregnated ovum is arrested in the tube. A decidua is formed closely resembling the decidua vera. At the same time, a decidua is formed in the uterus, and is cast off in shreds, or as I have seen entire, usually after rupture has occurred. As the tube becomes distended, hemorrhage may occur in its lumen and cause the death of the ovum, or it may go on to full term without rupture, or if rupture occurs without fatal hemorrhage, the fetus may develop in the abdominal cavity or perish at the time. Those which do not terminate in rupture, advance much like the normal pregnancy, and when the full term is reached, spurious labor sets in, after which the fetus dies, the placenta gradually disappears, the fetus is partly absorbed, and a lithopedion is left. A few children have been delivered alive by timely operation.

Hemorrhage may be so rapid as to cause death almost instantly or within a few hours, or may be slow and repeated forming a hematocele. The fetus and products of conception may be absorbed and disappear, or may become partially absorbed and find exit through the rectum or bladder, or they may become infected forming an abscess, which may cause peritonitis, or slow or rapid sepsis; many of the latter cases terminating in death.

Symptoms.—Symptoms are conveniently divided into those occurring before rupture, at the time of rupture, and after rupture. Those cases going to term without rupture are extremely rare, and must be differentiated from normal pregnancy by the physical signs.

The symptoms before rupture resemble those of normal pregnancy. There is, however, the history of sterility, either complete or for a period of years. We have missed menstruation which in about the sixth or eighth week, is replaced by an irregular continuous flow containing small clots and shreds. The complete membranes are sometimes expelled but unfortunately, generally too late to aid in diagnosis. There is usually discomfort, paroxysmal bearing-down pains rarely severe, the breasts become enlarged and tender, nausea is often present and in one of my cases it was a chief symptoms.

This was especially a sad one, and she lost her life from failure of early diagnosis; she literally starved to death. When I saw her she was extremely emaciated and exhausted. The operation was done at once, but she never recovered from the shock.

The physical examination reveals the uterus increased in size and an enlargement in the tube which can be distinguished from the ovaries, being more rounded and firmer than the latter. The interstitial variety presents an enlargement of one horn of the uterus. I have never been fortunate enough to be called to a case before rupture, but it has occasionally been recognized.

The symptoms at the time of rupture are so characteristic and distinct that there is no excuse for mistaking them. The patient suffers with an agonizing pain; soon falls into collapse, with anxious, pallid face; the pulse becomes rapid and weak; the patient is restless; there is increased vermicular action of the intestine and there is great diminution or suppression of urine.

These symptoms may be so severe that the patient dies in a few hours. In 113 cases (Parry) in which the time was noted, 39 died in less than ten hours, 81 in less than twenty-four hours, and all but 15 were dead in forty-eight hours. There may be improvement after the first attack and the symptoms will recur. One of my cases had five such attacks.

Physical signs differ according to whether the hemorrhage is rapid or slow; if the former, there is evidence of fluid in the abdominal cavity; if slow, hematocele is formed which is detected by vaginal examination as a doughy mass about the uterus.

After rupture, if the case does not end fatally, the patient is pale and sallow, there is abdominal tenderness and recurring attacks of pain. The abdominal muscles are usually not rigid. The temperature may be normal throughout, but slight elevation is common.

If the mass becomes infected, we have the usual temperature of sepsis. This condition continues until the patient is exhausted or an abscess forms and opens and recovery after a tedious convalescence takes place.

Physical signs immediately after rupture are those of a blood clot. If the fetus lives, it will continue to grow and can be made out by a physical examination, and later heart sounds can be detected.

Diagnosis.—In a typical case this is not difficult. A woman after a period of sterility misses a period. In four or eight weeks an irregular flow appears, usually not profuse. There is discomfort and pain. Suddenly she is taken with an agonizing pain, shows symptoms of shock and collapse. Her pale and anxious face, rapid pulse and sighing respiration point to internal hemorrhage. Such symptoms warrant a diagnosis in every instance. The error would be too rare for consideration and those conditions which might be mistaken for it would also demand an operation.

In the first place, it is to be differentiated from normal pregnancy. This must be done by the physical examination, which would usually clear up the diagnosis. In late cases

where there is some difficulty in differentiating from a normal pregnant uterus with thin wall. By a vulsellum attached to the os, the uterus can be drawn down and palpated, and its relation to the tumor made out.

In abortion the flow is more profuse, pains are not so severe, and there is no collapse. The whole appearance of the case is not so grave, and there is no enlargement of the tube.

Abscess of the broad ligaments, fibro-cystic tumors, ovarian tumors, can usually be differentiated by the symptoms and the physical signs. In appendicitis the temperature is usually elevated, the tumor if present being located higher in the abdomen, there is rigidity of the abdominal muscles, and shock and pallor are rarely present. It is well to remember that appendicitis and extrauterine pregnancy may coexist. Dr. Linthicum had such a case on which he operated and the patient recovered.

Acute endometritis or salpingitis, is attended with fever. Each is much milder in onset, there is no collapse, and the menstrual flow is more often excessive than missed. Renal colic with a normal pregnancy sometimes presents symptoms very similar, but the absence of physical signs will usually exclude that. I came near operating on one such case, and it was only after careful examination under anesthesia that I excluded ectopic gestation.

Prognosis.—It is impossible to give the exact mortality in unoperated cases. It is estimated by various authorities from 50 to 82 per cent. Parry collected 500 cases from various sources. In 9 of these the result was stated. Of them 336 died, and 163 recovered. As these statistics were collected before operations were made, it is probably a fair statement of death rate.

Parry says, "In the catalogue of mortality, rupture of the cyst heads the list, with the fearful number of 174 out of 329 deaths. Some of those cases in which rupture takes place into the abdominal cavity without fatal hemorrhage, do entirely recover by the death of the ovum. Still the death rate is so high, that in the presence of such a case, we must consider it almost necessarily fatal. In the later cases, the percentage of fatalities is lower, but full recovery without operation is rare." The mortality from operations for extrauterine pregnancy will depend on the promptness of the diagnosis. If detected early there will be few if any fatalities. Those located near the uterine end of the tube may be so rapidly fatal, that no operation can be done soon enough to save life. I should think that the mortality from all operative cases would not be over 20 per cent, and this is due almost entirely to delay.

Treatment.—It is not my purpose to discuss the treatment, all authorities now agreeing that operation alone is indicated. No one would think of dallying with electricity, or attempting to inject the sac at this time.

If the diagnosis is made before rupture, the ovum and the tube should be removed.

At the time of rupture, the indication is immediate operation, and ligation of the bleeding vessels, and the removal of the tube. In the latter months the fetus should be removed, and the placenta left in situ to come away by necrosis, unless so situated that all the vessels of the placenta can be ligated, and the entire mass moved at the time of the operation.

In all cases, early or late, the uterine and ovarian arteries should be secured as early as possible, after which the mass can be removed at leisure.

In the past ten years I have operated on thirteen cases of extrauterine pregnancy with two deaths. Before this time I have had a number more, but my records are incomplete and cannot give accurate reports. My first case was seen two weeks after rupture; she had fever and localized peritonitis about the clot. Thinking that this might be walled off by adhesions I did a vaginal puncture and drained the blood off, but unfortunately also forced some of it into the peritoneal cavity and the patient succumbed to the septic absorption. She was in a very bad condition, bloodless and septic, when I saw her and doubtless would have recovered if an early operation had have been done. The other fatal case was also a late one; the patient suffered with vomiting and was exhausted from eight weeks of starvation. She had had three attacks of pain and hemorrhage which had farther sapped her strength. She died from shock a few hours after the operation. Had the condition been diagnosed and operated upon six weeks before, as it might have been, she doubtless would have recovered.

The mortality of my cases, therefore, was clearly due to delay; an early operation would have saved all of them. As it was, the mortality was 15 per cent, and we may feel quite sure that it would have been between 50 and 80 per cent if they had been let alone.

Dr. J. C. Culbertson, of Cincinnati, formerly editor of the Journal of the A. M. A. and the Lancet-Clinic, died at his home on June 4, aged 67.

WHY DO YOUNG MEN CROWD INTO THE PROFESSIONS?

A. L. BENEDICT, M. D.

BUFFALO, N. Y.

APPLETON'S MAGAZINE for April, 1908, contains an article on the righteousness of doctors' fees that will interest the medical profession, although in many respects, physicians themselves will disagree with the individual assertions, which lead up to the general contention that the profession is underpaid.

Anyone who has had much to do with medical students, realizes that it is only a small minority of them that has any very serious calling to a life work. Without in any sense deserving criticism, as being mercenary or unappreciative of the duties of professional life, the great majority of medical students have chosen their course very much as other young men decide between hardware and dry goods, because they must earn a living in some way, and because they either have an opening with some relative, or because of dislike for certain other lines of work, or for some very trivial circumstance that directs them to a medical college at a certain time. A considerable number of older students are dissatisfied with teaching, pharmacy, or some business that affords present leisure but offers comparatively slight hope of advancement, and these study medicine because it is about the only thing that is available under these circumstances.

Even among practitioners of medicine, one is impressed and, at first, shocked, at the number who manifest no interest in medicine as a science, who make little effort to improve themselves in it as an art, and who are looking ahead to retirement at as early an age as possible instead of lamenting that physical incapacity will finally compel them to retire.

It is well known to the profession and the profession has very frankly and even from motives of self-interest—passed this information on to the laity, especially to prospective students, that medicine as a business is overcrowded and underpaid. Why is it then, that in spite of these facts, so many young men deliberately choose it with essentially business motives?

To a certain degree, the choice is not so much of medicine but of a profession, that is to say, it is nearly a matter of accident that the lot falls to medicine instead of to law or some other profession. In spite of the average poverty and the average lack of anything like social prestige in the personal sense, medicine still preserves its mantle of eminent respectability, "learnedness," and social tone, along with the ministry and the law. This fact alone makes it attractive to the wealthy young man who wants some occupation, not so much as a matter of necessity but because, fortunately, America has not yet sunk to the level at which one may simply be a gentleman without being scorned. The same fact also attracts the barefoot farmer's boy and the emigrant's son, who want to rise in the world. Again, it also attracts or, at least, does not repel the young man of what we should call the middle class if we did not live in America.

While teaching is less arduous and better paid than the so-called learned professions, if we average men's incomes, and while its higher positions require much more "learning," it has not yet acquired the glamor of the time-honored trio. Nevertheless, it is a numerically large and highly attractive profession. Various other professions, as the branches of engineering, architecture, dentistry, music, art, etc. require some special talent or skill which the majority of individuals do not possess.

In the choice of the three "learned" professions, it is obvious that the ministry cannot appeal strongly to the average man, simply on account of the fact that the average European is not essentially religious and that, lacking a special interest in religion, no man who is not a hypocrite could endure the many restrictions and the peculiar social status of the clergy. Thus, the choice for the average young man who wishes a professional life in the typic sense, is narrowed down to medicine and law and, so far as can be judged, they are about equally attractive and both professions are about equally overcrowded. However, owing to the natures of the two professions, a man may continue to be a lawyer and yet support himself by business—such as the sale and management of real estate, detective work, more or less temporary management of various enterprises, insurance, etc.—while the physician must, as a rule, limit himself pretty closely to actual practice or else abandon his profession.

On reading the article alluded to, our first feeling was of surprise that young men should voluntarily enter the medical or even the legal profession, instead of business, unless attracted to the former by a very strong sense of fitness or a pure sentiment of duty.

But, on second thought, it became very apparent that what the author classified as "business" was comparable only to the condition of the eminent medical specialist or surgeon or consultant, to the corporation lawyer or the one with an enormous influence

and prestige. The young man does not choose a business career in this sense, but he is either lifted to it by family influence or he acquires it by a long, tedious and hazardous struggle. Neither can one prepare himself for a business career by a formal and comparatively simple course of study as he can for medicine or the law, excepting in the very specious and rudimentary training of the business college. The latter prepares merely for the routine, subordinate work of business and even the broader courses now offered by certain universities, in matters of finance and business, presuppose individual fitness and opportunity in a much more direct sense than medical and law courses.

The choice of a business career means, not becoming a bank officer or a railroad officer or even the proprietorship of a small retail store, but engaging in a very humble, subordinate, poorly paid form of work, promotion from which is uncertain and dependent largely upon influence, wealth, or at least, the development of special qualities and the ability to fit one's self for a line of work as different as medicine is from some unrelated occupation.

Looking at the prospects in advance, without knowing how his own life will turn out, and with the optimism of youth, the average young man with no capital and influence, is not going to consider whether he may not receive all that he ought as a physician, still less will he consider whether his competition will prevent some one else from receiving his dues, he will consider merely whether, balancing a reasonably certain income not requiring capital or direct promotion to some other man's place, with a largely speculative chance of success or utter failure, and with the absolute requirement of capital obtained in some way, he will enter a medical college or take some humble job at ten or twelve dollars a week.

New York State Colony for Defectives.—It is gratifying to announce that the legislature has passed a bill making an appropriation of $188,475 for the purchase of 1,800 acres of land some thirty miles from New York City, near West Haverstraw, and four miles from the west bank of the Hudson River. The commission appointed by Governor Hughes in 1907 to select site for the new State Colony did its work thoroughly and well. It only remains now for the legislature to pass a bill properly organizing the new colony. Its scope and purpose need to be specifically defined and an appropriation made for beginning the work of construction.

GLIMPSES OF EARLY ST. LOUIS MEDICAL HISTORY.*

CHAPTER IV.

W. B. OUTTEN, M. D.

ST. LOUIS.

Dr. Chas. W. Stevens.

And now God made man to meet this earth's and all human needs. He made man's body a perfect thing of aomed exalted function, and within him put the most marvelous and stupendous array of forces known in the all-embracing and mighty universe of the great Jehovah. Man's body is the home of life, the start and puissance of growth and existence. In it abides the pith, force and end of progress; the course, germ and end of movement. Man's body is God's means to an end and man's means to all accomplishments. Man is God and man's instrument to all material and immaterial combinations. Man's body is the maker of force heat and worth, the organizer of stuff and function. In him is the begetter of intellect, the producer of knowledge, the evoker of organization and work, the hope finite guider and ruler of the earth. Man's body is a connecting link between two eternities, since man begets his force from the invisible and unknown, makes its action manifest in the visible and known, and by God's will this force is returned to the invisible again.

> And thus in the ceaseless evolution of man
> Omnipotently wrought in the womb of time;
> Man must, will and ever eternally be
> Earth's greatest unsolved paradigm.
> —From Student's Notes on Anatomy.

Chas. W. Stevens was born June 16, 1817, in Pompey, Onondago county, N. Y. He was educated as a civil engineer, he came West and finding little encouragement for success in that vocation, he commenced the study of medicine with Dr. Rogers, of Rushville, Ill. He graduated in 1842 at the medical department of Kemper College, which afterwards became the Missouri Medical College. In 1844 he was elected Demonstrator of Anatomy at Kemper Medical College. He held the position for five years when he was elected to take the same position in the St. Louis Medical College. In 1855 he was elected to the chair of General and Descriptive Anatomy in the St. Louis Medical College. He went to Europe and spent nearly a year in France, England and Scotland. After serving over thirteen years as Professor of Anatomy in the St. Louis Medical College he resigned his professorship to take the po-

Note.—Chapter I of this series, dealing with the life of Drs. Joseph Nash McDowell and M. A. Pallen appeared in the Medical Fortnightly, March 25, 1908; Drs. Adam Hammer and M. L. Linton, April 10th; John T. Hodgen, April 25th; Charles Alexander Pope, May 25th.

sition of superintendent and physician of the St. Louis Insane Asylum. He left this position in 1872 to resume the practice of medicine. In 1861 he was appointed coroner of St. Louis County to fill the vacancy caused by the resignation of Dr. L. Chas. Boisliniere. He was elected president of the St. Louis Medical Society in 1879, and during the war he served in the army for nearly a year.

Good teachers are born and not made, but then excellence and superiority in almost any intellectual calling is largely a matter of birth. The secret of good medical teaching lies as much in respecting the wants of the students as in the selection of the subject matter. No medical professor who is infatuated with the power of his own intellection and who cannot feel the lacking element met in the formation of his knowledge can fully appreciate the want of his student. A successful professor always puts himself upon a level with his student and never pretentiously above them, for when he does this nothing creates dislike in a student any sooner. The student may be pleased with this at the time, but ultimately a natural envy makes him berate and dislike this professor. The medical teacher must have a friendly feeling for the student. "The head best leaves to the heart what the heart alone divines." He, the teacher, must ever be on the lookout for doing a good office. When one gives himself trouble in order to please it soon becomes manifest and has due and virtued effect. Good medical teachers are not like politicians who must often talk and act before they have thought and read, or be very poorly informed regarding a question, all of his notions about it be vague and inaccurate, but speak he must, while a good medical teacher must be at all times well and broadly informed regarding the subject matter of his lectures and let his talk be clear, apt, homely and applicable.

Dr. Chas. W. Stevens was an excellent teacher, and as before said, a natural teacher, because he knew the wants of his students instead of parading his knowledge, he held to his subject and placed himself in that position which courted inquiry and made the student feel that he, the student, was conferring a favor upon Dr. Stevens by asking a question. When he started in to demonstrate a part he never left it until every student understood.

Dr. Stevens was of slim build and must have been nearly six foot tall; he carried himself very erect, was natural and graceful in his motions. His head was of medium size and well contoured, especially his forehead, which was broad and square; his eyes were of medium size but full of expression, the crow feet extending from the outer and inner corner of his eyes and around the lids, plainly indicated that they were laughing eyes. He had a large and well shaped nose, with high cheek bones, with a clean shaven upper lip and an almost Uncle Sam goatee. Yes, indeed, his was pre-eminently an American face, and as for his manners, they were always agreeable, kindly and refreshing. There was no fictitious benevolence about this man, but there was always with him the little kindness in the details of life which made him innately polite. He appeared to forget self for the sake of others. As Burke says: "Manners are what vex, soothe, corrupt or purify, exalt or debase, barbarize or refine, as by constant, steady, uniform, insensible operations, like that of the air we breath." So with the doctor, he soothed, purified, exalted and refined his surroundings. He was a magnificent genial soul of kindly feeling, who made his every student feel that he was in truth a friend. In his quiz work he was effective and made it pleasantly competitive. If a student failed to answer correctly he never turned coldly to the next student to make a horrible example of failure, but he would say in his kindly way, "Perhaps you did not understand," when he would then and there answer the question, and make the student affirm his answer. Right here permit the writer to say, a professor has it in his power to fill the soul of many a student with deep gratitude and pleasant memory, so that when a student brings up what is past he may make the remembrance a delightful theme.

> God bless him, back in the mazy tremulous past.
> Biding far away into that unknown silent land;
> Ah, what pleasing delightful scene he brings to me.
> This modest, unembarrassed, and kindly gentleman.

Such was the extreme enthusiasm of Dr. Stevens and his almost worshipful admiration of the anatomy of man, it made him create profound respect and zeal in the minds of his students. His delivery was of the chatty and home-like sort, just such a voice as his you have heard all your life. It hummed in your ears when a child, it purled in them as you advanced in life, its sheer, pleasing familiarity made it soothingly and continuously effective. Ah, how well I remember how he aroused within me wonder and enthusiasm, thought, reflection and hope. Let him but find an important point in his demonstrations and each and every student had to see it. It comes to me now as it did in the past and this voice seems to say: "Put your best thought, put your deepest consideration into this which I now demonstrate to you. This is the human brain.

Now, then, lo and behold, this world is a reality outlined unlimited, yet unceasingly grand and marvellous in its product, still the medium of a creator, for the genesis of life's greatest and most illimitable organ, the brain. Man's brain is the organ of the highest, most poweful, most expansive, most utilitarian product of life. Man's brain viewed as matter is but a convoluted mass, whose tenuity is frailer than the petal of a rose. Its form singularly varied in contour, depressions, crypts, teeming in nondescript multiple streaks, of gray and white matter. Quaint cavities cornuated chambers, holding within themselves expressionless, oval whitened forms, rounded ivory-like looking orbs, hidden canals, and wandering mazy depths. Man's brain is a seeming mass of mushy incongruities whose frail fantastic construction, whose tottering vascillating weight, seems to court shapelessness and annihilation. Compared to the immensity of its accomplishment it is the most amazingly insignificant looking substance made by God. Yet in verity it represents the grandest temple of this universe. This pulpy mass, this soft heap, represents the zenith and the nadir of God's created substances. No aggregate mass but its own self in this universe has like indescribable mystery and sublimity. Gaze on this daedalian pile, yes, ponder deeply, reverentially upon this tortiled paradigm. Inspect its intricate perplexities, its antitype convulution; yes, place your life's highest, best, and most exalted mentality in its scrutiny. Call to your aid the grandest genius who has ever strode upon our mundane sphere, yea, even bring a multitude of geniuses and yet, forsooth, the combined intellect of this brainy legion can ne'er tell the wondrous limit of its power. True, in life a brain's lybrinthian mellow cast, has welled in force so marvellously over and beyond its strange and petty size, as to suggest that its each and every cell has connected itself with the ponderous and the infinite. Nay, I will tell thee, and tell thee only too feebly, that this soft and entwined orb has been the dwelling place of men whose thoughts have decided the earthly destiny of millions of its fellow creatures, and whose actions seem to shake the very frame of this monstrous globe. Even so, has it been the dwelling place of men who brought glorious knowledge, the rarest and sweetest comfort, the greatest and most splendid advancement to millions in the past, and to millions yet to come. Still more has this matrix held the souls of men who have soothed, blest and given glorious hope to a sad and needful world. Yes above all these, infinitely above all these has there welled within its etoliate convolutions every moiety of good or evil that has been shown in the world's of trillions souls. Yes, it has borne within its depths the picture of every action since man's creation. Lo and behold, it is the inconceivable, the incomprehensible, the connection of the finite with the infinite, of the impotent with the omnipotent. Deep within this brain we come to those wondrous cavities called ventricles. How long has it taken to make this brain of man. Perchance the limit of its age may be almost as the stars of heaven. Its wonders are mystifying and this mystification begets the depth of marvel and the grandeured holiness of worship. Here deep in its depth exist chambers transcendentally wondrous in their construction. These ventriculated chambers ever depend upon the outline, depth and convoluted shape of its outer crust. 'Tis a wonderland, teeming in the strangest, most uninterperable and ponderous force of earth. The repository and store-house of every lifeful action enacted by all life since this world began. The years accrued in its garnering beyond computotion. The history of life's first atom, the history of its incomprehensible and unimaginable procreation and fruitful development to the present. Here is the accumulation of a thumaturgic world holding within them the vibration and impression of every atom which has begot activity in the millicns of years of its existence. Here, indeed are we surrounded by the very elements which touch the infinity of God and the materiality of man."

It can be truly said that Dr. Stevens was indeed a very enthusiastic teacher and especially enthusiastic in anatomy. His enthusiasm was constant and unceasing and as said by Madam de Stael, "The sense of this word among the Greeks affords the noblest definition of it. Enthusiasm signifies "God in us." How can any one study or teach anatomy without having enthusism, "God in us?" and what was more, this grand old teacher begot in his students what is Emersonally expressed, "the leaping lightning of enthusiasm not to be measured by the horse power of the understanding."

"This, gentlemen, is the pineal gland, supposed by Descartes, to be the seat of the soul," continues this chatty home-like voice. "Observe it, gentlemen, observe it, a small reddish gray body, conical in shape. . . . the pineal gland is about four lines in length, and from two to three in width at its base, and is said to be larger in the child than in the adult, and in the female than in the male." In after lecture hours the students discuss lecture subjects, of course they discussed the pineal gland, as only students can.

The wit of the class says: "Descartes must have been a good deal like experiment, energy out of a job. Heavens, no, it cannot be that the soul's mighty seat is 4x3. If this be so it must be right, the soul has no clothes, but goes in tights."

Between the dissecting rooms and the chair of Anatomy the students of this college were remarkably well up in anatomy. A demonstration of the brain was always an event for this part of the human anatomy was always too precious to pass over lightly. The demonstration started in with the calvarium, showing the attachments of the membranes and the consequent formation of the sinuses. The blood supply of membranes and brain, then the brain itself and the origin and distribution of the nerves, etc. It was not an infrequent thing to have Dr. Hodgens, Dr. Stevens and Dr. McDowell demonstrate a brain some time each month so that there was eight or ten brains demonstrated monthly. Anatomy in those days was a much valued and earnestly taught study. Earnest, conscientious teachers are indeed the glory of our institutions.

Finally, Dr. Chas. W. Stevens' virtues were uniform, conformable to duty and reason, and of unvarying constancy. Nothing need be added to give them more virtue, he did all that he was required and did it well. His constant fidelity in little things, as well as large ones, made him a man of good and splendid virtue. A man of fine character, ever ready to pardon the errors of man, endowed with firmness, steadiness of principle, in just moderation, and splendid perseverance, patient and sympathetic.

APPENDICITIS IN PRUSSIA.—The number of cases of appendicitis treated in the public hospitals of Prussia is said to have increased from 8,412 in 1903 to 16,781 in 1906. The mortality has dropped from 9.46 to 6.68 per cent, it is the highest between the ages of 10 and 25. One exchange states that more persons have died at this age from appendicitis than from all other diseases combined.

THE JAPANESE RED CROSS SOCIETY.—The sixteenth anniversary of the founding of this society was held in Hiblya Park, Tokio, on June 1st. The society now has a membership of 1,414,225, including 504 Americans, 590 Coreans, and 6,440 Chinese. The value of its property exceeds $7,000,000. Connected with its medical staff are 212 doctors, 143 pharmacists, and 3,369 nurses, 668 male and 2,701 female. Since the Russo-Japanese war the society has put into commission two large hospital ships, in addition to the two already in use.

SELECTED ARTICLE

A NEW DUTY OF THE MEDICAL PROFESSION: THE EDUCATION OF THE PUBLIC IN SCIENTIFIC MEDICINE.*

HERBERT. L. BURRELL, M. D.

BOSTON MASS.

THE welcome that is extended to us this year by this great metropolis is peculiarly grateful, for Chicago is the home station of this national Association. This great city should serve as an inspiration to us all, for it personifies the best of the American spirit —vigor, enterprise, and stability of purpose.

DR. HERBERT L. BURRELL.

This city during the year has lost one of its most gifted citizens, one whose name was honored in all countries, an ex-President of the Association. All honor to the memory of Nicholas Senn, surgeon, writer, investigator, publicist, a man who did pioneer work in surgery and who was always ready to promote the interests of the medical profession.

The coming together of men of mutual aims must always be a subject of public interest. What is the meaning of this gathering of medical men from the length and breadth of this great country?

First: That individually they may be better able to care for the sick. Second: That they may collectively be better fitted to prevent disease. Third: That they may know

*President's Address. Abstract, Jour. A. M. A.

men and their ways and by social intercourse may live fuller and broader lives. This Association is a great power for good or for evil. May its acts be guided by motives that are directed toward the health and prosperity of the people.

There are many subjects of which I should be glad to speak. Some of them have been considered by the Association in previous years. Medical education, medical legislation; the desirability and the question of the advisability of the medical profession taking an active interest in practical politics; the establishment of a national bureau of health; the abuse of medical charity, and the work of the Council on Pharmacy and Chemistry; all are subjects of vital interest. Today I invite your attention to what I believe is a relatively new duty of the medical profession, that of judiciously educating the public in the present position of medical knowledge and in the advances that are being made in scientific medicine.

Until recently medicine has observed a silence as to its position and its accomplishments that has made it unique among its sister sciences. A veil of mystery has surrounded it. Born, as medicine was, of fear, nurtured by superstition, it went through the centuries in twilight until it grasped the torch of science, which is beginning to illuminate its way. For long years medicine was only a handmaiden to theology. Faith, that inestimable gift to man, was the guiding star of medicine. Faith in "simples," in fetiches, in amulets, in poisons, in all the forces of Nature and in all the dread legion of phantasms that may be formulated by the mind—all these at times have held sway in medicine. Theories, hypotheses and "fads," ingenious and often containing a grain of truth, have in turn dominated medical practice.

The profession has properly been conservative, because the truth in reference to health and disease has not been known. When the vital processes are looked at in the abstract, they are so marvelous and still so far from being entirely understood that it is little wonder they are surrounded by an air of mystery. The family practitioner of our grandfather's days was a man who was greatly respected. He was discrete and silent. When he entered the sickroom he held his counsel. He appreciated the fact that he was in the presence of a human being afflicted with disease. Frequently he realized that he did not know either the natural processes of health or the natural history of the disease that he was facing; therefore he was silent. The satirists have always pictured the practitioner of medicine as a venerable old gentleman who discretely nodded his head in acquiescence or disapproval, who said vague things, and who encouraged his patient and the household to hope for the best and prepare for the worst.

At present I believe that physicians are too conventional in their methods of treating disease. They have not paid sufficient attention to the alleviation of the suffering that accompanies some of the incurable maladies. Hydrotherapy, massage, electrotherapy, and particularly psychotherapy, as measures of relief, are permitted to rest in the hands of empirical practitioners, who but slightly understand the forces with which they are dealing. Human beings cling hard and fast to hope. They, fortunately, will rarely accept defeat. They constantly hope when in distress that aid will come by some intervention, physical, psychic or divine. This insistent demand for relief must be remembered by practitioners, but they should also recognize, as Louis did, that there is a natural course of disease.

Progress in science is always haltingly made. In medicine, which is but applied biology, the movement now is steadily forward; for through chemistry, biology and physics has come some knowledge that enables us to comprehend more clearly many of the vital phenomena of life. Today we are in possession of certain irrefutable facts. It is unnecessary for me to catalogue to you the advances that have been made in medicine during this last generation; suffice it to say that it has caused a revolution. The application by Lord Lister of Pasteur's work in biology has made a new era in surgery.

Chemistry and biology have made sanitation a science. Physics has enabled us to comprehend some of the vital processes. These contemporary sciences have illuminated medicine, but have medicine and surgery in themselves properly advanced? I think not. The field for advance is still open in clinical medicine and surgery. The human being, particularly when sick, has not been scientifically observed as thoroughly as he should. Valuable scientific facts may be obtained by the clinician in the out-patient department and wards of a hospital, or, for that matter, wherever he meets disease. The reason that more of these observations have not been made in hospitals is due primarily, I believe, to the lack of adequate training of men in scientific methods, but perhaps more largely to the general belief that scientific work in medicine must be done in a laboratory. It will be granted, I think, that in science the closer one can observe a problem the better. Should not the wards of hospitals be the real

laboratories of medicine? Today there is in the wards of hospitals a wealth of facts that is not recorded even when recognized. When the opportunities that are really within our grasp are utilized, then there will be still greater progress in medicine. The three great professions, theology, law and medicine, have ever been the custodians of the spiritual, the material and the physical welfare of man. Medicine has been until recently in the background. The principle of theology has always been and always will be a matter of faith. The law has been a series of rules of action based on precedent and intended to secure equity and justice between human beings. Medicine, however, from being an art that ministered to the physical distress of man has come into a broader field of activity. Intelligent men and women now recognize that faith is dependent in large measure on the physical condition of the individual. Our criminal classes, it is now known, are frequently physical degenerates. Moral obliquities are often caused by physical conditions. The material welfare of man is no longer in the hands of the law alone; for great epidemics, which destroy scores of people and invalid thousands, and which often paralyze the commerce of a part of the world, may today be controlled by a knowledge of contagious diseases.

The leech which served in the Crusades was a camp follower, a servant retainer. Today the medical man who is responsible for the health of troops in the field has as high a responsibility in gaining success as the commander-in-chief of the army. The balance of power between the nations of the earth is maintained, in part at least, by the fitness of troops for service. This statement I make is applicable to every civilized nation. Its truth has been demonstrated in every modern war; never more strikingly than in the Spanish-American war.

A singular and unprecedented apathy, to be charitable, prevented the chairman of the Committee on Rules of the House of Representatives of the United States Congress from permitting the United States Army Reorganization Bill to come before that body. And this notwithstanding the fact that the bill was favored by the President of the United States, the Secretary of War, and the United States Senate, while a careful canvas demonstrated the fact that the bill was favored by a majority in the House of Representatives. But within a few weeks the chairman of the House has seen the truth and has allowed the bill to be passed, and it has now received the signature of the President. We are at last in a position to meet, in part at least, the exigencies of a modern war.

Education has been, and I sincerely trust always will be, the cornerstone of our civilization in this country. No permanent advance will ever be made unless the people are educated to the truth. Laws are never effective unless the people want them to be enforced. I cannot recall any great or permanent advance that has been made by force alone; and even when force has apparently succeeded, it usually leaves an unjust and more or less complex, unstable condition. Our civil war blotted out a great veil, but it left a race problem that has not been satisfactorily settled. The "flareback" of force usually defeats itself. I have an abiding faith in the public. I believe in it. When made to think, it reaches a wise solution of a problem. Observe, the key to safe public opinion is to make the public think. Unthinking people are less to be depended on than animals.

In what medical subjects should the public be educated? Let us not be blind to the fact that our scope of usefulness as physicians in dealing with the large disease problems depends in great measure on the co-operation of the public. Tuberculosis is still the most pertinent subject on which information should be given. The public should be informed that at present an early, thorough operation is the most certain way of curing cancer. The work already accomplished by the public in co-operation with physcians in controlling tuberculosis, ophthalmia neonatorum and scarlet fever comes to every one's mind. The work that has been done in controlling yellow fever in Louisiana by the public and the medical profession is a striking example of educating the people as to the facts concerning disease. The various infectious diseases are obviously ones concerning which the public should be informed. The people should be educated as to the necessity of pure air, pure water and pure food; they should know the hygienic value of bathing. They should know that hospitals are provided not alone for the care of the sick poor but that knowledge of disease may be advanced.

Commercial houses within a few years have found that it pays to care for their employees. It is true that in some instances a spirit of altruism has led to this action, but practical experience has shown that a higher and a better type of work comes from employees who are intelligently cared for. In one commercial house in Boston a physician gives his professional services to the employees as he might to a hospital clinic. If any salesman falls below in his sales he is

directed to appear before his physician. A careful examination usually reveals some adequate physical cause that accounts for the individual's lack of energy. Anemia, indigestion, constipation, incipient tuberculosis are recognized and treated, and the salesman is frequently restored to his full earning capacity. Intelligent merchants recognize that the better care that they take of their employes the better service will be rendered in return. Loyalty is a force the value of which cannot be overestimated, and it is secured and preserved by employers who are really interested in their employes.

The czar-like dictation of labor unions, which arbitrarily limits the amount of work that a man or woman is permitted to do, is a force that seems necessary to meet the greed of capital, which in the past often cast aside its employees like worn-out garments when they were no longer useful. I hope that labor unions in the future will demand not that the number of hours and the productiveness of the individual shall be limited, but that capital and labor shall protect the individual against disease, in order that he may have the highest degree of productiveness. Throughout the world there are cooperative business establishments in which the interests of the employees are protected in a measure, but this protection is usually financial. If the employer and employee would recognize that the preservation of working capacity of the employee is even of greater importance than a 10 per cent divident on a few hundred dollars saved, a great mutual gain would be secured.

Business men should see to it that their employees are informed as to the proper methods of life; protection against disease by employers is not alone a duty on their part but a real financial investment, as recognized in the work of the Welfare Department of the National Civic Federation. The medical profession must recognize that co-operation with business men in these public duties is a new duty of citizenship.

Who among the public should first be educated? Those who are leaders in the community; those who are in positions of responsibility—national, State, city and town authorities, trustees of hospitals and schools—they should first be informed as to the facts concerning disease. Experience has shown that the lay public takes a keen interest in everything concerning medicine and its progress. The success of nostrum vendors has demonstrated their skill in appealing to the sentiment of the public. The Board of Public Instruction should always appeal to the reason of the people. Great discretion should be used in selecting the subjects in which the public should be educated. Experience would teach such a board what not to do. "Don't" should be the motto for this board when in doubt as to educating the public.

What are the means by which we may reach the public? Newspaper articles on selected subjects, giving facts concerning a given disease, but not the treatment of disease, should be furnished the press. These articles should be signed and published under the authority of the Board of Public Instruction. That these articles should be judiciously edited must be apparent to all. No statement issued by the Board of Public Instruction should fail to be the absolute truth. Irreparable damage to the medical profession and to the public might be done by unwisely exploiting mooted subjects. It would be unfortunate if this new duty of educating the public in medical matters were taken up indiscriminately by the members of the medical profession. It may well be appreciated that this new duty may be considered a legitimate means of advertising the individual. But self-seeking for the medical profession, or for any individual member of it, would be quickly recognized by the public. Discredit, then, would be brought on the profession and on the individual.

Another means of reaching the public might be by magazine articles. The facts concerning certain diseases might well be given to skilled lay-writers, who should be paid for their services. A lay-writer has the art of presenting a subject to the public in an attractive manner.

To my mind, one of the most important movements in the Association is the establishment of county graduate schools in the various States. I can conceive of no better stimulus to this work than the adoption by the county schools of a plan by which one of its members shall inform the public, once a year, as to the facts concerning some selected disease.

The work of the Council on Medical Education is progressing. Dilapidated medical schools are disappearing. Why? Publicity. When the public recognizes that in order to become a well-educated physician certain requirements are absolutely essential, then, and not till then, shall we have true reform in medical education. I commend to your consideration the work of the Council on Medical Education.

Free lectures to the public on selected medical subjects constitute one of the most useful methods of spreading information. These lectures should be given by men who are authorities in their subjects; and the experiment as it has been tried in various parts of the country, particularly in Chicago

and at Harvard, has been a success. At Harvard during this last winter the lectures have been so popular that at times a hundred or more people have been turned away, being unable to gain admission. A wide range of subjects has been covered in these lectures. Many factors influenced the attendance: First, the subject selected; second, the individual who gave the lecture; and third, the condition of the weather. Sunday after noon lectures were better attended than Saturday evening lectures. Inclement weather markedly diminished the attendance. The most conspicuous factor that influenced the attendance at the lectures was the co-operation of the press. For example, when a lecture was given on a subject of great public interest, then if the press devoted from half a column to three columns to noticing it, the stimulus to the attendance at succeeding lectures was marked. Personally I have had nothing to do with these lectures, but I believe that they can be made effective almost in proportion to the co-operation of the press.

The medical profession, and many of the public are afraid of the press. Whether this position on the part of the public is justified or not, need not be discussed. I have never had occasion to appeal to the press for assistance and co-operation in any public measure without receiving hearty, but at times, to my mind, indiscrete assistance. The position of the press, as I understand it, is that it is the judge as to what constitutes news. Newspapers will publish what they think the public wants to know, but not what we think the public ought to know. They assume, quite properly, the right of decision. The greatest power that we can have to diffuse information is the public press. Let us be frank with it, and I believe that it almost invariably will be honest with us. Collier's Weekly and the Ladies' Home Journal have been wonderful forces in diffusing the truth.

There yet remains, ladies and genlemen, a means of educating the public which I believe will be the most potent of all. This rests in the well-educated family practitioner who now has a new duty, has the care of the household, who watches the growth of the children, who sees the father and the mother bend under the strain of life, react and again assume their work, the counselor of the family—he it is who can carry into the homes of this country the judicious truth concerning disease. Well-educated people have recognized that the wave of specialism which threatened to obliterate the family practitioner was dangerous for the welfare of the whole. The trouble is that we all consider ourselves, when ill, as peculiar examples of some disease, when, as a matter of fact, all we need is the counsel and advice of a sound-minded family practitioner who has known us and our families for many years.

There is a distinct reaction, I believe, against the obliteration of the family practitioner. The well-educated family practitioner now has a new duty. He it is who should be the instructor of the family. This is particularly true in relation to the subjects which in medicine cannot with propriety be taught the public in masses; these subjects may be taught most appropriately to the parents and, if need be, to the children, by the physical counselor of the family.

A great duty rests on the practitioner of medicine today. He must not shirk it; he must rise to his new burden, accept it and bear it. The reward to the medical profession for taking this new burden of judicious publicity in medicine will be a broader life for the practitioner, a greater consideration for his fellow man, better citizenship and the recognition by the world that the medical profession is a great public benefactor.

ON SOME RELATIONS OF THE PHYSICIAN TO THE PUBLIC.*

WILLIAM SIDNEY THAYER, M. D.

BALTIMORE, MD.

The physician has always been and, from the very nature of his calling, must be, more or less a public character. In the smaller community he is a public character in the sense that he is a common source to which the citizens repair for advice, not only concerning their physical and mental, but often also their material well-being. In the larger centers of population he is a pubilc character in that it is on his direction, on the results of his studies and research, that the community depends for the organization of those more general, broader sanitary measures which are demanded to meet the exigencies ever arising and multiplying with the growth of large urban communities. In the early days of this country, when there were no large cities, the physician exercised this influence individually among his patients, as the family friend and adviser. With the growth and development of the nation, the great relative increase of the urban population, the multiplying complications of our life on the one hand, and on the other, with the enormous advances made in the knowledge of the nature and sources of disease, of the relations of physiology and pathology

* Oration in Medicine. Abstract, Jour. A. M. A.

to other natural sciences, together with the rapid progress in the art of medicine and surgery—with all this growth, this expansion, yes, one may almost say, transformation—the functions of the physician have considerably broadened.

The crowding together of the population into great cities has brought with it new dangers. The poisoned well may affect one or two families at most. The poisoned water supply of a great city may affect thousands.

Scarlet fever in the country town has few victims and may be more or less readily controlled. In congested tenements populated by ignorant and suspicious aliens who do not understand the language of the people among whom they live, it is widely different problem. These new dangers involving the broad questions of public health and prophylaxis, questions of drainage, of water, of milk and food supply, of the care of contagious diseases—these demand the individual attention of men who have had special training. The great questions of water supply and of drainage cannot be attended to properly by the engineer alone, nor can the protection of the city from epidemics of infectious disease be safely entrusted to boards of health consisting of public-spirited citizens; both are dependent on the advice and assistance of the trained sanitarian.

Today, as is known, malaria is the scourge of the Hellenic peninsula. Endemic throughout the land, it saps the vitality, the strength, the virility of the people, carrying away annually its tribute of thousands of human lives. There is no race in the literature of the early days of ancient Greece of the scourge which has since laid waste the land. Malaria appears to have been introduced into Attica during the fifth century B. C.

Alhough the conditions of the soil and the probable presence of anopheles must have been favorable for the spread of the disease in the greater part of the Peloponnesus, yet the first mention of its occurrence is apparently in the Wasps of Aristophanes (422 B. C.). But the writings of the fourth century B. C. give evidence that the disease had gradually spread until finally it became chronic and endemic. And step by step with the spread of the disease, the historian traces the beginnings of that fatal degeneracy which mark the fall of the race. A spirit of criticism, of jealousy, of pessimism arose; discord, disunion and civil strife followed, and in a few centuries the earthly abode of the gods was a mere tributary of the Roman Empire.

True or fanciful as this suggestion may be, it is hardly an exaggeration of what a preventable infectious disease may do. And one can but ask himself what might have been saved for the world had we known then what we know now. Today, with an educated and specially trained body of medical men, assisted by an enlightened government, the Italians have reduced the mortality in the fever-ridden parts of their neighboring peninsula two-thirds in five years; and the task is but begun. Already in reigons where agriculture was abandoned, work is being renewed and a fresh life is springing up.

There is a modern example which touches us closely, of a great undertaking—one of the greatest undertakings that man has ever essayed—which depends for its success largely on the labors of physicians. I refer to the Panama Canal. The French, with unexcelled mechanical skill and energy, had failed—failed largely because of the dreadful and continued mortality among the workmen. The United States took up the work. In the meantime there had come the great discoveries of Ross and Grassi and Bignami and Bastianelli, completing those of Laveran, concerning malaria, and the vital and illuminating contributions of our own Reed, Lazear, Carroll and Agramonte, with regard to yellow fever. And today the Panama Zone compares favorably, as to sanitary conditions, with the more healthy parts of this country. Yellow fever, though on all sides, is here unknown. It is the greatest triumph of preventive medicine that the world has ever known. And to whom is this due? A few months ago I had the good fortune to listen to an account by a distinguished foreign physician, of the work at Panama, whence he had just returned. After speaking with warmth of the general conditions, he said impressively, "The successful completion of the Panama Canal depends on one man!" If the measures admirably planned and carefully carried out by Colonel Gorgas fail, if there is a moment's relaxation, if the old epidemics recur, it will be impossible to find laborers, and the work will fail again as it did before. And he did not exaggerate. It is on the success of these prophylactic measures, which can be designed and carried out only by a specially trained sanitarian, that the completion of this great undertaking depends.

There is yet another opportunity for public usefulness in this country for which the training of the physician is peculiarly valuable. I refer to the career of the legislator. One has but to consider the few examples already mentioned of the various ways in which medical knowledge and skill are of value to the State, to realize how useful the education of a physician may be as a preparation for public life. It is true that medicine and

public life are equally mistresses, and that few men can serve both as they could and should be served; but we have in this country hardly realized how valuable a preparation for public life is the training and career of the physician. One has but to look to the prime minister of our sister republic in Europe for a most brilliant example of what may be accomplished in modern political life by the man with a medical training.

We know well that the one successful way to prevent the spread of many contagious diseases in the large community is the establishment of well-conducted hospitals in which the patients may be isolated as soon as possible after the breaking out of the malady. By providing for the early segregation of these patients in institutions offering to the sufferer the most enlightened care, the community confers a blessing of incalculable value on the families of rich and poor alike. Such hospitals, moreover, afford the only opportunity for the proper instruction of students of medicine in the diagnosis of these contagious diseases, the early recognition of which is of such vital importance to the public. Furthermore, we know that such institutions are absolutely without danger to the neighborhood in which they are situated. But I know a great Eastern city where there has been until recently no provision whatever for the care of contagious diseases. More than this, some years ago the State legislature passed a law forbidding the erection of a hospital for contagious diseases within the city limits without a two-thirds majority of each branch of the city council, which rendered the erection of such a hospital almost impossible. To us this law seems wicked and brutal in the extreme, worthy only of savages. And yet the measure as passed by men who were not inhuman; they were simply ignorant. And it is difficult to remedy such ignorance by immediate argument. I know again a great city, the water supply of which is open to serious contaminaion. At a period during which extensive and radical public improvements were under consideration, a meeting was held of a committee appointed to take counsel as to those steps which should be taken to improve the water supply. Before this committee there appeared a number of medical men and sanitarians, including representatives of the State and city boards of health. These men urged that steps be taken to provide ultimately for a proper system of filtration. After they had spoken, a gentleman connected with one of the city departments, an engineer, who had the last word, made a long address in which he denied with passion that the water supply was or could be contaminated. He ridiculed the statements of the sanitarians and physicians, opposing to them the frequently repeated and wholly unfounded assertion that they were dealing with theories, he with facts. The committee by an overwhelming majority dismissed, for the time being, the question of filtration.

How often, again, do the trustees of large hospitals generously seek to "protect" the patient from what they regard as inconsiderate and unnecessary scientific zeal, by closing the wards to instruction and denying admission to student assistants, thereby cutting off from that sufferer the greatest boon that they could offer him—the most enlightened observation and care. How far are these good men from a comprehension of the true significance and value of the hospital to the patient and to the public!

These are but a few examples, but they are enough to show how little a considerable part of the general public understand the nature of medicine or sympathize with the generous efforts of the physician and the investigator. We can hardly expect people with ideas such as these to heed the advice of a body such as ours. These considerations should bring home to us the realization that the education of the public is a most vital duty, not only of medical schools and associations, but of each separate member of the medical profession.

Many misconceptions concerning the nature of the healing art arise from that strange atmosphere of mystery which so often surrounds medicine. To physicians there is nothing mysterious or supernatural about medicine. We recognize that medicine is a practical art resting on a basis of scientific ally proved facts. We know that there is an enormous field for study. We practice our art simply on the basis of what we have learned from the experience and study of those who have gone before us, and on what we acquire daily from our own study and experience and reason and common sense. But from time immemorial the art of medicine has been connected in the mind of man with the supernatural and the divine. People speak of "belief" in this, that or the other "system" of medicine, and on the basis of such "belief" recklessly hand over their bodies to some individual who asserts that his practice is based on a theory or system revealed as by inspiration to some fortunate mortal, perhaps yesterday, perhaps two hundred years ago.

Again, there is a very general idea among the public that the physician is by practice, if not by nature, disingenuous; that while he may be trusted to do his duty as he sees it, to his patient, truth is not to be expected of

him. From these misconceptions we physicians cannot, I fear, be regarded as wholly guiltless. We know how few specifics there are in medicine. How easy it is to write the prescription which we know is of itself of little value, which we should never dream of taking ourselves, and to allow the patient to believe that it is this that has "cured" him of the transitory, self-limited malady! How easy it is by assuming an impressive air, to make the people feel that we possess that mysterious power which has, perhaps, come to us from a long line of medical ancestors, the power which enables us at a glance to divine that which might never be revealed to our uninspired colleagues.

It is, of course, obvious that truthfulness in medicine does not mean that it is always necessary to tell the paient that he has a fatal disease if he does not ask you the direct question. Nor does it forbid the physician to seek and keep his eye fixed on the cranny of hope which may usually be found, as earnestly and sedulously as would the patient himself. Few events in human affairs are certain. Few patients ask a physician the direct question, but when they do they should be told the truth as we should tell the truth in every other sphere of life. I believe sincerely that most physicians do so, and that the annoying general suspicion of the doctor's statements is ill-founded; but I know a number of good men who too often allow their kindness of heart to get the better of their good judgment. I know nothing sadder, nothing more hopelessly demoralizing, nothing surer to upset the mutual confidence of a family than the entrance of the "white lie" into the household or the sick-room. Few of us are unfamiliar with the hopeless uncertainty of the invalid who comes finally to realize that a tissue of falsehood has been spun about him; that on no one can he rely. The affection of those about him he may not doubt, but of their sincerity how can he again be sure? There is no more pathetic picture in the experience of the practitioner of medicine. The physician has no higher public duties than the duty of simplicity, the duty of the avoidance of mystery in medicine and the duty of truthfulness. Toward his patient I know of no more vital duty than the duty of optimism.

There is another widespread misconception to combat which is an important public duty. I refer to the too common feeling of the public that with many of us the practice of medicine is purely and simply a trade. Viewed in this light the practitioner can but be often an object of suspicion. The best part of his influence is gone. The inconveniences which every earnest doctor must endure are always considerable. Most physicians are obliged to depend on their fees, as most clergymen are obliged to depend on their salaries for their daily bread. They must provide not only for themselves, but limit their practical activities, as well as men teachers, scientific workers, men who desire to limit their practical activities, as well as men who have achieved such a position that they are obliged to restrict or select from the overwhelming practice which seeks them, who for these very reasons rightly demand large fees. If the public insists on having their services rather than those of many other good men in the profession, they should and do understand that they must pay a larger honorarium. This is perfectly right and proper. But there are very few physicians who enter into the practice of medicine with the idea of laying up wealth. There are, happily, exceedingly few to whom medicine is a trade. The man to whom the scientific and humanitarian aspects of medicine mean nothing; the man who practices solely for what he can make; the man who finds no interest in medicine ouside of that which he puts in his pocket; that man is on a level with the conscienceless quack, and the sooner he leaves the profession the better for it and for the public.

There exists, however, a tendency among some of us—men who are, for the most part, honest and honorable—which is, it seems to me, below the dignity of our calling. I refer to the tendency to regulate one's fees according to the means of his paient. It is well that a man should have a more or less definite estimate of the value of his services, a fixed maximal charge for work of a certain character, a charge which, in justice to himslf, he should always make, unless he has reason to believe that the patient is not in condition to meet it. He will often, with a large proportion of his patients, perhaps, be obliged to accept less than the value of his services. But that he should speculate on the wealth of the rich, is to make medicine a trade; is to bring distrust and suspicion and discredit on his profession. Another duty is the instruction of the public with regard to the necessary measures of prophylaxis in connection with infectious diseases. General laws and sweeping public measures are of themselves insufficient to prevent the spread of such diseases as malaria, yellow fever, plague, cholera and typhoid fever. It is only through the cordial and general co-operation of the practicing physician with an enlightened public that efficient prophylaxis can be established.

To properly combat the spread of preventable infectious diseases we need: (1) An en

lightened public, (2) a conscientious and united medical profession ready to do its duty as individuals and especially to work in a spirit of cordial co-operation with (3) central and local boards of health which are under the direction of trained sanitarians. The organization of all these measures depends, in the end, on the results of our individual efforts as physicians. The education of the public can be accomplished only by us; and it is our duty to explain to the people the rules of self-protection. The faithful performance by us as physicians of the necessary measures of prophylaxis in every individual case is almost the cornerstone of the edifice. These duties, it is true, greatly complicate the life of the physician. The measures which we ought to carry out are tedious and annoying, but they are no more so than the aseptic and antiseptic precautions employed daily by the surgeon. They are duties which we must recognize unless we are content to lose, as we do every year, thousands of the very flower of our youth through the preventable diseases; unless we are content to remain as we are now, one of the few nations in which the disgraceful prevalence of typhoid fever, a filth disease, is a byword throughout the civilized world. Isolated individual effort, however, goes but a short way of itself. We must co-operate with one another and with our boards of health; we must work in unison and see to it that, as in the case of scarlet fever and measles and diphtheria, so every case of typhoid fever and tuberculosis is reported and the proper measures of prophylaxis taken.

And lastly, the character of our State and local boards of health, that most vital point, depends largely on the attitude and efforts of the medical profession. After what has been said it is hardly necessary to refer to the increasing importance to the community of local and central boards of health. Moreover, in recent years departments of health have assumed a wholly new significance with the establishment of diagnostic laboratories. Modern methods of diagnosis, microscopical examinations of sputa and of the blood, bacteriological examinations of smears and cultures from the throat, tests for specific agglutines in the blood in fevers, are too complicated and time-absorbing for the busy practitioner. Much of this work is done in private laboratories by specially trained men. There are, however, many who cannot afford the additional expense of such examinations, many who must always be cared for by the benevolence of the physician or at the public expense. But it is absolutely necessary, not only for the sake of the patient, but also for the protection of the public, that these more precise measures of diagnosis be carried out so far as possible in all suspicious cases. If not, a vitally important link is removed from the chain of our public measures of prophylaxis. And so it has come to pass that State and county and city boards of health in which such examinations are made at the request of the attending physician. Now, it is clear enough to any mind that the direction of such boards should be in the hands of men with a special training as public sanitarians, pathologists and bacteriologists. That these facts are not wholly appreciated by the general public, that the pernicious influence of political favoritism now and then plays a part in the selection of such bodies need not be mentioned. But I wish to assert my convicion that, as a people, we are too fond of using the word "political" with a smile of contempt; we are too fond of speaking lightly of the conscience and honesty of the politician. I have rarely met men in political life who did not pay considerate attention to the judicious and tactfully offered advice of conscientious physicians. It is for us physicians to set them an example. We know the kind of man who should preside over a department of health. And yet, what a spectacle do we see, with changes of administration, in almost any of our cities! Applications from busy practitioners; from men who, perhaps from age or infirmity, desire to retire from active work; from men who have been unsuccessful in practice and are in need of money! How is the politician to know what to do if we behave in this manner. We physicians do not always realize the responsibilities which rest on us in this connnection? We ought to act and speak fearlessly and frankly, so that men obviously unfitted shall be ashamed to offer themselves publicly for such positions. We ought to see to it that the representatives of our profession on such bodies are capable and well-trained men. This again is a public responsibility, a public duty, which falls upon each one of us as a practicing physician.

In the matter of students as clinical clerks we as physicians must teach our non-medical friends. When they realize that the hospitals need medical students as trained assistants, as a part, really, of the staff; when they realize that the students need hospital experience to make them capable physicians; when they realize that they owe this training to the physician in order to protect themselves and the public; then and then only will the old opposition to the instruction of sudents in the wards of hospitals disappear.

The mention of these few opportunities

for public service, opportunities which come to us all as physicians, should but impress on our minds the thought with which these remarks opened, namely, that the physician is, from the very nature of his calling, essentially a public character. And, however, modest may be our field of work, our responsibility should always be before us. On our learning, on our progressiveness, on our alertness, on our honesty, on our fearlessness, on our perseverance, hang not only our own welfare, but that of the general public; in other words, that of our country, in much higher degree than we often realize. It is a heavy responsibility. Of much in the past we may be pround. There is much in the present on which we could improve. And the future? What shall that be? The answer lies with us.

(NOTE.—The Oration in Surgery, by Dr. Geo. W. Crile, on "The Cancer Problem," will appear in next issue.)

THE following words are said to have found a place for many years in the late Dr. Cade's surgery, Spondon, Derby, England:

"Brandy, beer and betting,
Domestic care and fretting
Will kill the strongest man alive;
But water, air and diet,
Domestic peace and quiet
Will make the weakest man to thrive."

MISSOURI VALLEY DINNER.—One of the many pleasant affairs of the A. M. A. meeting in Chicago, was the dinner given on the evening of June 4, at the Victoria, by the Medical Society of the Missouri Valley. Covers were laid for 114, including ladies. In addition to the members, the following guests were present and responded to toasts: Dr. Hugh H. Young, Baltimore; Drs. H. J. Boldt and Edwin Leonard, New York; Dr. L. M. Crafts, Minneapolis; Dr. T. H. Holland, Hot Springs, Ark.; Drs. J. J. and C. F. Taylor, Philadelphia, and others. Dr. Chas. Wood Fassett officiated as toastmaster.

A BILL now before Congress was introduced at the request of the General Federation of Women's Clubs, and asks for an appropriation of three-fourths of one cent per capita on the 80,000,000 people of the United States. It aims "to investigate and develop methods of treatment of tuberculosis." The intention of the bill is educational, and embraces (1) supplying free of cost and authoritative statement of the best methods of treating tuberculosis; (2) supplying free of cost reports on later developments, and other literature having for its object the suppression of tuberculosis; (3) for the collection of data, models and plans which shall form a permanent exhibit.

THE MEDICAL FORTNIGHTLY

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EDITORIAL

The Chicago Meeting of the A. M. A.

THE meeting of The American Medical Association at Chicago was easily the greatest assembling of physicians in the world's history; while the attendance did not reach the anticipated 12,000, the registration up to the last day showed that better than 6,500 members were present, while the non-members materially increased the number. Missouri's delegation was large, 262, of whom 103 were from St. Louis, had registered up to Wednesday evening; the figures at the end of the meeting are not at our command, but unquestionably passed the 300 mark. The association had as guests from abroad Dr. Chas. E. Beevor, of London, Profs. Brauer and Sauerbruch, of Marburg; Prof. Schafer, of Edinburg; Pfannenstiel, of Kiel; Martin of Griefswald, Chipault of Paris, Moynihan of Leeds, and numerous others, all of whom contributed materially to the interest of the various programs.

So large a meeting of necessity taxes the best of accommodations, and while there is no question that Chicago handled it with a remarkable degree of satisfaction to the members, yet by the placing of the general headquarters in the Armory at 16th street, the general sessions at the Auditorium, the largest section (the Surgical) at Orchestra Hall, and the other sections all the way south to 20th street scattered the meeting over near two miles of territory and gave us all a vivid realization that Chicago is a city of tremendous distances, getting about occasioned unutterable weariness, though many did attempt to utter it. Those from St. Louis who had considered the desirability of bringing the association to this city at a subsequent date found occasion to give especial attention to the matter of accommodation, and while we could not have better

accommodated so large a meeting we could much more compactly accommodate a large meeting with either the Odean or the new Coliseum as a center.

The social aspects of the meeting were largely in the hands of the members, the President's reception and the smoker and the section dinners were along the usual lines; there was more than an usual number of college reunions and numerous private entertainments to individuals and groups of individuals. Dr. Kenneth W. Millican, formerly of this city but for some time on the editorial staff of the Journal, entertained the St. Louis physicians in attendance at the meetings at his home on Tuesday evening, and the occasion was one of the pleasantest of the week for those who were so fortunate as to be present. Members from far inland were disappointed that no provision was made to utilize the lake in the way of entertainment; a passenger boat might have so easily been chartered to give a short lake trip for those who have no opportunity for such an experience at home and would have paid for itself.

The Exhibit Hall was filled with faces strange to those who have for the last decade made it a rendezvous and have anticipated meeting those genial purveyors to our needs. The exhibit was large and considerably eclipsed those of the past, but we missed the good fellows whom we have associated with it in the past.

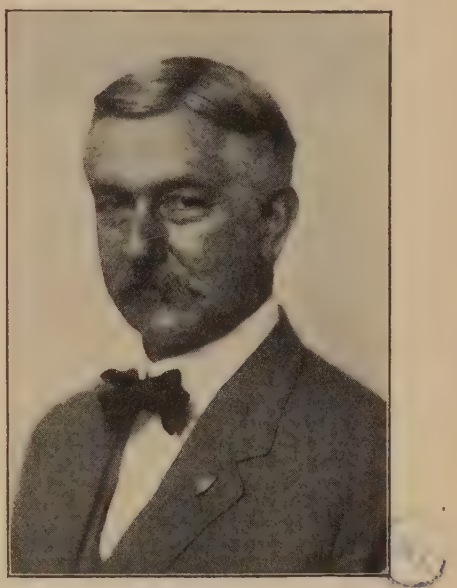
It would be impossible to even attempt to give any presentation of the work done in the general and section meetings in a report of this character, each of the twelve sections was in itself an important medical gathering and represented the best the world affords in the special line, in spite of the many attractions of the great city, the attendance at each section was good throughout the meeting, and at the larger the seating capacity was exhausted on different occasions, so that members had to be turned away. Of the scientific work we will have more to say later.

The usual interest centered in the election of officers, and as usual the general prediction was at fault, though the result is decidedly to the satisfaction of the association. Col. William C. Gorgas, medical director of the Panama Canal Commission, was chosen president. He received ninety votes in the House of Delegates to twenty for Dr. Casey A. Wood of Chicago. The following were unanimously elected: Vice-President, Dr. Thomas Jefferson Murray, Butte, Mont.; second vice-president, Dr. John A. Hatchett, Oklahoma; third vice-president, Dr. Thomas A. Woodruff, Chicago; fourth vice-president, Dr. E. M. Hall, Kentucky. General secretary, Dr. George H. Simmons, and treasurer, Dr. Frank Billings, Chicago, were re-elected.

Atlantic City, N. J., was decided upon as the place for the next meeting.

The officers of the various sections will be announced later.

Numerous independent societies held meetings in Chicago at the time of the large meeting, notable among these was the meeting of the American Medical Editors, which convened at the Auditorium, the American Urologic Association, which met at the Great Northern, and the American Proctologic Association which met at the Palmer House. These meetings were of unusual interest throughout, but their great importance was lost sight of in degree, because they were so overshadowed by the big meeting.



COL. WILLIAM C. GORGAS
President-elect American Medical Association

In another part of this issue will be found abstracts of the excellent addresses delivered at this meeting.

Physicians Who Advertise and Are Advertised.

THE charge has lately been made by a local medical journal that certain members of the St. Louis Medical Society were enjoying the benefits of space advertising in the lay press and in poster-directories of lay organizations, the method of the making and detail of the charge has forced it on the attention of the society and

the profession. Without explanation the facts as presented seem sufficient evidence of grave error; the explanation is forthcoming in each case and removes responsibility from the accused But there is something more than the fact of negotiating an advertisement in a daily paper at issue, none of these men have done this, the evidence to the contrary notwithstanding, but they have failed to properly impress their assistants and friends with the fact that such publicity is objectionable to them. Every physician has his experince with misguided patients who think that he needs their testimonials; and we occasionally meet one who will, without consulting his physician, purchase space in the lay press to express his appreciation and admiration. Such an experience is a trying one for the man who has the proper estimate of his position among his fellows and in the community. But the profession has in its number many who occupy a place within the fold who are medical boasters who devote their time telling laymen and physicians of their wonderful surgical achievements, of how many horses they wear out in making their calls, there can be no mistake as to the desires of such men, and we must confess that we have our doubts whether publicity of almost any character is tryingly objectionable to them. Medical men believe but a small part of their self-narrated, scientific exploits, but the laity is not so conservative in its judgements, and forms its estimates of greatness quite as often on personal representations as on scientific results. Another element of the profession is that which is either foreign or is educated in a foreign tongue; the local periodicals in other than English, many of them, are said to contain the cards of physicians with a wide range of data as to their eminence and ability in special lines. Still another class carries its names in the directories of suburban towns and advertises itself through this means.

As medical students we were taught the real inwardness of ethics in so far as advertising is concerned, and we have never been able to find a better or safer method; the good professors of that day told us that we must depend on the results of our work to bring us other work, that any other form of publicity, whether gratutiously or self-instituted, was a misfortune and ill-advised. We hope the St. Louis Medical Society will thresh out the matter of advertising impartially and thoroughly; that there will be no use of "whitewash," and that a cleansed atmosphere will result. We would suggest that those men who have assistants, who have been giving details of operations and other information to the press, be impressed with their responsibility over their assistants and their ethical character, the surgeon or physician should be held responsible for such irregularities on the part of his helpers, and he should jealously defend his reputation from their assaults.

The profession is indebted to the Medical Era for bringing the matter into the limelight.

Pure Milk Again.

THE Supreme Court of Missouri has recently declared the ordinances of our city which have been so effectively giving us clean pure milk to be unconstitutional in the prohibition of the addition of preservatives and other foreign matter, and we are left with only such protection as is given by the State law. That this is a calamity is a self-evident fact and one the fatal details of which will be manifest as the heated term progresses. The province of the Supreme Court is legal rather than humanitarian, and its judgment is purely legal, and as such cannot be criticised. We have but to regret that so good a law presented any weak point at which it could be attacked. The problem that now confronts the public and the profession is to inaugurate a move for the safety of infants and children who will be the sufferers. It is a strange thing that purveyors for as vital a necessity as milk must be forced to present it in a safe form, by a specious shifting of responsibility all along the line from the producer to the milkman no one is responsible for unsafe adulteration and preservation, embalmed milk reaches the babies, but no one is *the* one who has done it. The directors and officers of a milk company may occupy their pew in the amen corner, and may be vitally concerned about the fate of the African savage, or the closing of the saloon and at the same time show utter unconcern about the babies who are being slaughtered by impure milk. The medical profession is often misunderstood in its efforts, and no where does it meet with greater opposition than in its effort to insure pure food; when it interferes with the purely commercial it meets opposition and antagonism. The honesty of its motives are evident to one who will give the matter the slighest attention, no other profession at any point works so disinterestedly as does the medical profession in its endeavors along hygienic and sanitary lines. To meet the present emergency the St. Louis Medical Society has taken the initiative, the Council has appointed a committee composed of Drs. Behrens, Bishop and T. A. Hopkins, who

are to co-operate with the Committee on Public Health and Legislation, committees from other societies, and the Board of Health in an effort to hinder an epidemic of infantile disease, and to secure the enactment of a new and effective ordinance as speedily as is possible.

ST. LOUIS ITEMS.

DR. FRANK P. NORBURY, formerly of this city and for several years editor of the FORTNIGHTLY, spent a few days in our city recently.

ST. LOUIS was incorporated, November 9, 1809. If present plans on the part of prominent citizens develop, the first centennial of the incorporation will be celebrated by a week of festivities, ending November 9, 1909.

DR. BRANSFORD LEWIS, of this city, has returned from a short visit to the Mayo clinic, at Rochester, Minn., where he delivered an address by invitation, to the Surgeons Club. Dr. Lewis was elected an honorary member of the club at its last meeting.

DR. TEICHMANN GOES TO CEYLON.—Dr. W. C. Teichmann, for many years a resident of this city and at one time city chemist, has lately been appointed U. S. Consul to Colombo, Ceylon. For two years past Dr. Teichmann has held a similar though less important post in Saxony.

PHENOL THE FAVORITE FOR ST. LOUIS SUICIDES.—Two hundred and eight persons committed suicide in St. Louis between March 31, 1907, and March 31, 1908, according to the annual report of Coroner Jules Baron. This is eighteen less than during the previous year. The means of death and the number of suicides follow: Phenol (carbolic acid), 102; morphine, 5; strychnine, 3; arsenic, 3; paris green, 1; gas, 6; drowning, 4; jumping from buildings, 2; razors and knives, 8; gunshot, 43; by leaping in front of steam cars, 2, and by hanging, 16. Only three of this number were negroes; 149 were males and 56 were single. According to the report, 17 who ended their lives were between the ages of 10 and 20 years; 96 were between the ages of 20 and 40 years; 20 were between 60 and 70 years and 7 were over 80 years of age.

STAND UP FOR ST. LOUIS.—The endeavor to establish in her citizens an enthusiasm over her virtues is most commendable on the part of those who have the interest of St. Louis at heart. We firmly believe that St. Louis has so many advantages over any other city which we have visited, and there are few that we have not visited, that every resident should be an enthusiast. But there is no occasion to misrepresent facts, we *do* have hot weather during our summers. We can not understand the purpose of putting the thermometers of the Weather Department better than 200 feet above where people live and telling the country that we have a temperature of between 70 and 80, when the people are sweltering and *enjoying* a heat of above 90! St. Louis has two and a half months of heat, and the rest of her year is so ideal as to make up for it and make us forget it. But St. Louis heat is hot and it is the thermometer on the street which tells the truth about it.

AMERICAN UROLOGICAL ASSOCIATION.—At its meeting in Chicago, this organization elected the following officers: President, Wm. T. Belfield, Chicago; vice-president, Geo. K. Swinburne, New York; secretary, Hugh Cabot, Boston; treasurer, Arthur T. Chute, Boston.

THE ANTI-SALOON CRUSADE IN MISSOURI.—Opposition to the saloon does not always mean opposition to an intelligent use of liquor, the saloon itself is an institution which has made itself objectionable. Official reports show that 71 of the 114 counties of Missouri have eliminated the saloon, and that in seventeen other counties saloons are licensed only in towns of more than 2500 population, only two of the seventeen having more than one such town.

FATALITIES OF THE GLORIOUS FOURTH.—Statistics gathered for the Journal of the A. M. A. show that for the five years, 1903-1907, the celebration of our American Independence has cost the nation 1153 persons killed; 21,520 persons injured. Of the injured 88 were totally blinded and 389 partially blinded, 308 persons lost arms, legs or hands; 1067 lost one or more fingers, while there were burns and minor injuries too numerous to be enumerated.

THE MISSOURI ASSOCIATION.—The authorization of an Eye, Ear, Nose and Throat Section and the undertaking of Legal Defense on the part of the Association were two features of the last meeting most worthy of notice. The scientific work of the Association will hereafter be done in three sections, there having been for some time a Medical and a Surgical section. Legal Defense of Malpractice suits is no experiment; it has been adopted in the leading states and cities and has a foothold in Missouri through its inauguration by the St. Louis Society.

CORRESPONDENCE

DANGER TO PENNSYLVANIA FROM NEW YORK LEPERS.

To the Editor Medical Fortnightly :

The Public Ledger of Philadelphia, November 23, 1907, was kind enough to publish some observations of mine, relative to the danger to Pennsylvania, by reason of the foolish opinions and inaction of the New York Board of Health on leprosy, that it is not contagious. I pointed out that New York lepers were freely emigrating to the Pocono Mountains to obtain the benefit of mountain air. And I referred to the desirability of the health officers of Pennsylvania obtaining a legislative appropriation for a State or inter-state open-air sanatorium for lepers, just as we have for consumptives. As Pennsylvania, by our lax laws of non-isolation of lepers in New York is threatened by New York's lepers. I said, let us care for them openly, and not have them secreted throughout Pike, Wayne and Monroe counties.

The Ledger obtained to all this, a reply from Dr. Dixon, State Health Commissioner of Pennsylvania, and also the opinion of Dr. Schamberg. These gentlemen thought it "remote possibility" that lepers should come into Pennsylvania without their knowledge of the presence of one of them. Only one leper, a Chinaman at Harrisburg, was known in Pennsylvania to Dr. Dixon even with his wonderful "751 trained health officers" sweeping the State.

Dr. Schamberg also took issue with me on the points I made. Subsequently in the Medical Fortnightly of St. Louis, January 25. I published along with these gentlemen's comments a photograph taken in Pike county, Pa., showing that lepers were really there, and gunning openly.

Here is the paragraph which I published with that photograph:

"I enclose a photograph taken on the immaculate soil of Pennsylvania to corroborate my contention. Drs. Dixon and Schamberg do not know what they are talking about. A leper stayed last summer at ———hotel, a fashionable Quaker resort, also at the fashionable———hotel." Reprints of this discussion were afterwards mailed abroad, to some of my foreign correspondents. The eminent Dr. Jonathan Hutchinson, of London, writes as follows:

"You and I have arrived at very similar conclusions as to leprosy, with however the important divergence that you believe in skin contagion, and I almost solely in that by stomach. We both regard it as a form of tuberculosis."

Dr. William Munro, of London, England, author of "Leprosy," who spent most of his life caring for lepers at St. Kitts, British West Indies, wrote me this: "I am glad to see that you are still fighting the battle of knowledge against ignorance—for ignorance of the subject is the only reason that so much nonsense is spoken and written about it, and the more ignorant the writers are the more cock-sure they are of being right.

"Dr. Dixon's argument, that there are no lepers in Pennsylvania, because he has not heard of any, in the face of your positive knowledge, reminds me of the stupid magistrate who released a thief because though three witnesses saw him steal, his counsel produced a dozen who did not see him, ergo he was not guilty.

"Your idea of having sanatoria for lepers in every state is a modern version of segregration, which all history shows is the only possible means of preventing the spread of leprosy, as I pointed out thirty years ago, and as has been admitted by all authorities of the present day and only questicned by one or two faddists.

"Up to now I did think that the United, States were always somewhat ahead of this old conservative country, but my beliefs have received a rude shock when I read that the New York Board of Health acting on the advice no doubt of their medical officers, are repeating the awful blunder made by the Royal College of Physicians of London nearly forty years ago, acting on insufficient evidence, when they decided that leprosy was not contagious—a blunder which in my opinion cost hundreds, or thousands of lives. Possibly the New York medical officers have read this decision and having given no further study to the subject, have declared against communicability. I cannot imagine any one who has really studied recent reports on the subject coming to such an absurd decision.

The New York Board of Health no doubt has very extensive powers, but I am afraid that the behavior of the leprosy bacillus is ultra vires, so far as they are concerned; he is a very obstreperous member of society, and cares nothing for boards or colleges, but will go on spreading, increasing and multiplying wherever the folly of such bodies allows him free scope for his evil doings, by bringing the diseased in contact with the healthy. Those who in their ignorance and presumption take heedlessly on their shoulders the awful responsibility of spreading the disease are morally guilty of the murder of every unfortunate victim of

the disease, infected because of that stupidity and presumption. I speak strongly, because I feel strongly, for no language is strong enough for the condemnation of such an act."

Pennsylvania therefore, should take measures at once to have congress pass laws to take the care of lepers from the States, and establish a sanatorium for them on a mountain top somewhere, where they could be guarded away from the healthy population, and guided in their self-treatment. Surely lepers are sick, then why not have a hospital for them?

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MEDICAL PROGRESS

Comprising the Regular Contributions of the Fortnightly Department Staff.

BACTERIOLOGY AND PATHOLOGY.

R. B. H. GRADWOHL, M. D.

The Blood Changes in Meningitis Cerebrospinalis Epidemica, Meningitis Tuberculosa and Meningitis Purulenta Non Epidemica.—G. Zand (Virchow Archiv, Band 192, Heft 1, 1908) was influenced to make a study of the blood in various kinds of meningitis for the purpose of determining what aid can be obtained from such examinations in making the diagnosis and prognosis of the various varieties of infection of the meninges. There has been published already a considerable literature upon the blood changes in epidemic cerebro-spinal meningitis, the chief contributors being Williams, Altman, Rieder, Struempell, von Jaksch, Koplik, Spill, Grawitz, Foster and Goeppert. For instance, Williams found in 32 cases, 12 instances where there was a decrease in the number of leucocytes—an observation considerably at variance with the other observers. Altman and Rieder found a considerable increase in the number of leucocytes. Spill found 10,000 leucocytes to the ccm. in one case and 15,000 in another case of epidemic meningitis, and 20,000 each in two other cases. Goeppert found leucocytosis in his series of ten cases, as did Foster. Koplik found an increase in the number of leucocytes in his 21 cases ranging from 12,000 to 55,000 per ccm. So did Osler. Presser and Jez studied the blood from a qualitative point as well as from a quantitative; they found that the polymorpho-nuclear neutrophiles preponderated with a diminution in the lymphocytes,, with a marked diminution in the eosinophiles. Tuerk claims fever is due almost altogether to the increase in the polymorpho-nuclear neutrophiles.

The writer gives the following literature on the blood picture in meningitis tuberculosa: Rieder found the blood normal in one case of tuberculous meningitis, a leucocytosis of 14,000 in a second case. Zappert noted leucocytosis of 11,000, with 1.5 percentage of eosinophiles in a tuberculous meningitis case without fever. Limbeck counted leucocytes to 6,000 and 8,000 in his cases. G. Pick failed to find leucocytosis in two cases. Koplik who studied cases of tuberculous meningitis in children, found leucocyte count ranging from 20,000 to 25,000; a higher count in but one case; he claims that a higher count than 25,000 indicates some other kind of meningitis than the tuberculous. Tuerk notes a leucocytosis up to 20,000 in tuberculous meningitis.

The writer's cases number ten cases of epidemic meningitis in which the diagnosis was confirmed by the finding of the diplococcus intracellularis meningitidis of Weichselbaum; two cases of purulent meningitis which were epidemic cases; two doubtful cases where no lumbar puncture was made, but a provisional diagnosis of epidemic meningitis was in order, and six cases of meningitis tuberculosa. Of the ten epidemic cases, six died; of the tuberculous cases, six died and of the two doubtful cases, one died. These blood examinations were made at the same time every day, between 11 and 12 noon, shortly before meal-time. Therefore no question of digestion leucocytosis can enter here. The blood was taken from the lobe of the ear, which was cleaned with ether and punctured with a Franke needle. The red cells were diluted with Hayem's solution and the white cells with a 1% watery solution of gentian violet one part, glacial acetic acid one part, and water one hundred parts. The stained specimens were prepared with Jenner's stain, with Ehrlich's triacid and with Ehrlich's hematoxylin-eosin solution. It may be mentioned also that the percentage of hemaglobin was estimated in these cases with the Gower's instrument.

These examinations showed that in both epidemic cases (due to the diplococcus of Weichselbaum and in sporadic cases (due to the streptococcus) there is a leucocytosis up to 26,000 per ccm., during the height of the disease, with leucopenia supervening towards the lethal termination of the case. The grade of the leucocytosis seems to have no importance as indicating the severity of the infection. This leucocytosis is a neutrophile increase, with especial increase of the polymorpho-nucleated neutrophile cells. In meningitis epidemica, streptococcica and diplococcica, there is also an increase in the multinuclear neutrophiles as in other acute

infections, scarlatina, etc. It was noted in the epidemica cases that there was a decrease in the amount of hemoglobin as well as in the number of red blood cells to the ccm.

In the tuberculous cases, it was found that the count of the white blood corpuscles ranged from below normal up to 11,400 per ccm. This corresponded to the observations of Rieder, Zappert, Limbert and Pick. The lymphocytes showed a great increase in the differential count, as well as the transitional forms and the uninucleated cells. The count of the red cells was normal or slightly above normal. The hemoglobin estimation showed a diminution below the normal.

Of what value are these observations from a diagnostic or prognostic view-point? Simply this, that a high grade of leucocytosis in a disputed case would tend to rule out the possibility of the case being tuberculous. Again, leucocytosis in epidemic cases, followed by a decrease amounting to leucopenia, would point to an unfavorable ending of the case. In fact, the blood picture as in many cases must be considered as a symptom in meningitis case and must be so weighed in the balance.

TULANE ALUMNI AT CHICAGO.—Among the important incidents of the meeting of the American Medical Association was the Alumni banquet of Tulane University, held on Tuesday evening, June 2d, at the Union Hotel. There were present at this banquet, quite a large number of the former students of Tulane, men who graduted from the class of 1867 to that of 1907. The majority of those present were residents of a large number of different states. In response to the toasts proposed by the toastmaster, Dr. W. A. Evans of the class of '85, who by the way is Health Commissioner of Chicago and Professor of Pathology of the Medical Department of the University of Illinois, nearly all of the guests responded, and each spoke fitteringly of his Alma Mater. At the close of the banquet a resolution was adopted, and a committee appointed to provide a resolution to the effect that it be the sense of the reunion then being held that a like function be a part of the yearly program at the meeting of the American Medical Association, and that the journals reaching the former students be requested to make a note of this action. Among those present were: Drs. Edward Souchon, Rudolph Matas, Luther Sexten, D. M. Griffith, F. R. Tolson, W. W. Butterworth, H. J. Scherck, Joseph A. Dana, J. C. Berwick, Hugh B. Coffey, W. R. Buffington, Lucian H. Landry, W. C. Brewer, Morgan Smith, L. R. DeBuys, Alexander Magruder, John Smyth, Sidney. Simon, W. A. Evans, Marcus Feingold, Hugh Blake Williams, Shands, Allen, Parsons, J. T. Jelks, Chas. McVea, Portier, F. W. Parham, Thos. Regan, H. M. Folker.

THE MEDICAL FORTNIGHTLY

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The Medical Fortnightly is devoted to the progress of the Practice and Science of Medicine and Surgery. Its aim is to present topics of interest and importance to physicians, and to this end, in addition to a well-selected corps of Department Editors, it has secured correspondents in the leading medical centers of Europe and America. Contributions of a scentific nature, and original in character, solicited. News of Societies, and of interesting medical topics, cordially invited.

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COMING MEDICAL MEETINGS.

National Meetings

International Congress on Tuberculosis, Washington, D. C., September 21 to October 12.

Mississippi Valley Medical Association, Louisville, Ky., October 13-15, 1908.

Medical Society of the Missouri Valley, Council Bluffs, Iowa, Sept. 3-4, 1908.

Medical Association of the Southwest, Kansas City, Mo., October 20-21, 1908.

State Meetings

Colorado, Denver, October, 1908.
Idaho, Boise. October 8-9, 1908.
Kentucky, Winchester, October.
Minnesota, St. Paul, October.
Nevada, Goldfield, October 6-7.
New Mexico, Albuquerque,
Oregon, Portland, July.
Washington, Walla Walla, September 2-4.
Wisconsin, Milwaukee.
Wyoming, Sheridan.